

Notice of Allowability	Application No.	Applicant(s)	
	09/454,566	LINDNER ET AL.	
	Examiner	Art Unit	
	Kenny Lin	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 8/27/2004.
2. The allowed claim(s) is/are 1, 3-13 now renumbered as 1-12.
3. The drawings filed on 12/19/2004 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received:

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) hereto or 2) to Paper No./Mail Date _____.
(b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of
Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- Notice of References Cited (PTO-892)
- Notice of Draftperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 8/27/2004
- Examiner's Comment Regarding Requirement for Deposit
of Biological Material
- Notice of Informal Patent Application (PTO-152)
- Interview Summary (PTO-413),
Paper No./Mail Date _____.
- Examiner's Amendment/Comment
- Examiner's Statement of Reasons for Allowance
- Other _____.

EXAMINER'S AMENDMENT

1. Claims 1 and 3-13 are presented for examination. Claim 2 is canceled.

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendment was given in a telephone interview with James Retter on 11/24/2004.

4. The application has been amended as follows:
In the claims:
 1. (Currently Amended) A method for use by an industrial control system, the industrial control system including the method comprising:
a controller for providing control over an industrial process through at least one control element and at least one monitoring element each coupled to the network via a network I/O device, the controller communicating with the network I/O devices according to a layered general purpose query protocol including a transport layer for communication compatible with TCP (Transmission Control Protocol); the method comprising:

the controller analyzing performing an analysis of communication transactions related to sensor data and/or control commands between the controller and either the control element or the monitoring element; and

the controller making a permanent-type connection to the network I/O device for the control element or for the monitoring element based on the analysis of the communication transactions;

wherein the permanent-type connection is a connection at the transport layer left open for later use after an earlier use; thereby specializing the layered general purpose query protocol, which would ordinarily be used in computer to computer communications for making ad hoc queries of an external device, to use by the industrial control system in performing frequent communications of control and monitoring information between the controller and the control element or the monitoring element of the industrial control system.

8. (Currently Amended) A system, comprising:

a controller of an industrial control system; and

a control element and/or a monitoring element of the industrial control system;

wherein the controller and the control element or the monitoring element are connected by a network over which communication occurs according to a layered general purpose query protocol including a transport layer for communication compatible with TCP (Transmission Control Protocol); and

and further wherein the controller comprises:

means for analyzing communication transactions related to sensor data and/or control commands between the controller and either the control element or the monitoring element; and wherein the controller further comprises means for making a permanent-type connection at the transport layer between the controller and the monitoring element or the control element via a network I/O device coupling the monitoring element or the control element to the network based on the analysis of the communications transactions, wherein the permanent-type connection is a connection at the transport layer left open for later use after an earlier use; thereby specializing the layered general purpose query protocol, which would ordinarily be used in computer to computer communications for making ad hoc queries of an external device, to use by the industrial control system in performing frequent communications of control and monitoring information between the controller and the control element or the monitoring element of the industrial control system.

5. Claims 1 and 3-13 are allowed.

6. The following is an examiner's statement of reasons for allowance: None of the prior art of record teaches or fairly suggests all of the limitation of the claimed invention, specifically the limitation of the controller communicating with the network I/O devices according to a layered general purpose query protocol including a transport layer for communication compatible with TCP and making a permanent-type connection at the transport layer between the controller and the monitoring element or the control element via a network I/O device coupling the monitoring element or the control element to the network based on the analysis of the communication

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transactions related to sensor data and control commands between the controller and the elements, wherein the permanent-type connection is a connection at the transport layer left open for later use after an earlier use

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Blevins et al, US 6,445,962.

Pettit et al, US 4,669,040.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenny Lin whose telephone number is (571) 272-3968. The examiner can normally be reached on 8 AM to 5 PM Tue.-Fri. and every other Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ksl
November 24, 2004

Wen-Jan L
11/24/04